

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-22 (canceled)

23. (new): A nucleic acid molecule encoding a mutant Aequoria victoria Green Fluorescent Protein, said mutant Green Fluorescent Protein mutated at amino acid position 64 of SEQ ID NO:4, wherein said residue at position 64 is cysteine.

24. (new): The nucleic acid molecule of claim 23, wherein said mutant Green Fluorescent Protein is mutated at amino acid position 65 of SEQ ID NO:4, wherein said residue at position 65 is glycine, threonine, cysteine, asparagine, or aspartic acid.

25. (new): The nucleic acid molecule of claim 24, wherein said residue at position 65 is threonine.

26. (new): A host cell comprising the nucleic acid molecule of claim 23.

27. (new): A vector comprising the nucleic acid molecule of claim 23.

28. (new): The vector of claim 27, wherein said vector is an expression vector.

29. (new): A host cell comprising the vector of claim 27.

30. (new): A method for producing a mutant Green Fluorescent Protein (GFP), comprising culturing the host cell of claim 29 under conditions favoring the production of a mutant GFP, and isolating said mutant GFP from said host cell.

31. (new): A kit comprising at least one container containing the nucleic acid molecule of claim 23.

32. (new): The kit of claim 31, further comprising at least one additional container containing a reagent for delivering said nucleic acid molecule into a host cell.

33. (new): A humanized nucleic acid molecule encoding a mutant *Aequoria victoria* Green Fluorescent Protein, said mutant Green Fluorescent Protein mutated at amino acid position 64 of SEQ ID NO:4, wherein said residue at position 64 is cysteine.

34. (new): The humanized nucleic acid molecule of claim 33, wherein said mutant Green Fluorescent Protein is mutated at amino acid position 65 of SEQ ID NO:4, wherein said residue at position 65 is glycine, threonine, cysteine, asparagine, or aspartic acid.

35. (new): The humanized nucleic acid molecule of claim 34, wherein said residue at position 65 is threonine.

36. A host cell comprising the nucleic acid molecule of claim 33.

37. A vector comprising the nucleic acid molecule of claim 33.

38. The vector of claim 37, wherein said vector is an expression vector.

39. A host cell comprising the vector of claim 38.

40. A method for producing a mutant Green Fluorescent Protein (GFP), comprising culturing the host cell of claim 39 under conditions favoring the production of a mutant GFP, and isolating said mutant GFP from said host cell.

41. A kit comprising at least one container containing the nucleic acid molecule of claim 32.

42. The kit of claim 41, further comprising at least one additional container containing a reagent for delivering said nucleic acid molecule into a host cell.